

**UNITED STATES DEPARTMENT OF AGRICULTURE  
NATURAL RESOURCES CONSERVATION SERVICE**

**ECOLOGICAL SITE DESCRIPTION**

**ECOLOGICAL SITE CHARACTERISTICS**

**Site Type:** Rangeland

**Site ID:** R039XC056NM

**Site Name:** Loamy

**Precipitation or Climate Zone:** 16 to 30 inches

**Phase:**

## **PHYSIOGRAPHIC FEATURES**

### **Narrative:**

This site occurs on level to strongly sloping piedmont slopes or plains. Slopes averages 8 to 10 percent and ranges as high as 15 percent. Aspect varies but is usually not significant. Elevation ranges from 6,500 to 8,000 feet above sea level.

### **Land Form:**

1. Fan piedmont
2. Plain
- 3.

### **Aspect:**

1. N/A
- 2.
- 3.

	<b>Minimum</b>	<b>Maximum</b>
<b>Elevation (feet)</b>	6,500	8,000
<b>Slope (percent)</b>	8	15
<b>Water Table Depth (inches)</b>	N/A	N/A
<b>Flooding:</b>	<b>Minimum</b>	<b>Maximum</b>
<b>Frequency</b>	N/A	N/A
<b>Duration</b>	N/A	N/A
<b>Ponding:</b>	<b>Minimum</b>	<b>Maximum</b>
<b>Depth (inches)</b>	N/A	N/A
<b>Frequency</b>	N/A	N/A
<b>Duration</b>	N/A	N/A

### **Runoff Class:**

Negligible to medium.

## **CLIMATIC FEATURES**

### **Narrative:**

The average annual precipitation ranges from 16 to 30 inches. Precipitation increases with elevation. Variations of five inches, more or less, are common. Nearly two-thirds of the precipitation falls in the form of high intensity-short duration thunderstorms, from March to October. Winter precipitation is mainly in the form of snowfalls of six to ten inches.

Mild summers and moderately cold winters characterize temperatures. Large seasonal and diurnal temperature changes occur. The average annual temperature is about 45 degrees F with extremes of 26 degrees F below zero in the winter to 100 degrees F in the summer.

The average frost-free season is 80 to 145 days. The last killing frost is in early May to early June and the first killing frost is in early September to early October.

Temperature and precipitation favor cool-season, perennial plant growth. However, this site supports an important component of warm-season vegetation.

Climate data was obtained from <http://www.wrcc.sage.dri.edu/summary/climsmnm.html> web site using 50% probability for freeze-free and frost-free seasons using 28.5 degrees F and 32.5 degrees F respectively.

	<b>Minimum</b>	<b>Maximum</b>
<b>Frost-free period (days):</b>	106	147
<b>Freeze-free period (days):</b>	134	175
<b>Mean annual precipitation (inches):</b>	16	30

### **Monthly moisture (inches) and temperature (°F) distribution:**

	Precip. Min.	Precip. Max.	Temp. Min.	Temp. Max.
January	0.66	1.68	16.3	49.2
February	0.58	1.90	19.4	53.3
March	0.71	1.55	23.1	60.2
April	0.69	0.99	28.1	67.6
May	0.66	1.27	34.6	75.8
June	0.51	2.50	42.2	85.3
July	1.87	6.13	46.8	87.0
August	1.96	5.89	46.0	83.3
September	1.73	2.91	40.5	77.4
October	1.02	2.64	31.2	68.0
November	0.55	1.66	24.0	57.1
December	0.72	2.25	16.1	50.5

**Climate Stations:**

Station ID	Location	Period	
		From:	To:
291440	Capitan, New Mexico	01/01/14	07/31/00
291931	Cloudcroft, New Mexico	09/01/87	12/31/01
297649	Ruidoso 2NNE, New Mexico	01/01/42	07/31/00
298015	Sandia Park, New Mexico	01/01/39	12/31/01
298018	Tijeras Ranger Stn, New Mexico	1971	2000

**INFLUENCING WATER FEATURES****Narrative:**

This site is not influenced by water from a wetland or stream.

**Wetland description:**

System	Subsystem	Class
N/A		

**If Riverine Wetland System enter Rosgen Stream Type:**

N/A

## **REPRESENTATIVE SOIL FEATURES**

### **Narrative:**

The soils of this site are deep and well drained. Surface textures vary from fine sandy loam to clay loam. Underlying layers have textures that range from loam to clay. Some gravel or cobble may appear on the surface or throughout the profile. Permeability is moderate to slow and the available water-holding capacity is medium to high.

**Parent Material Kind:** Alluvium

**Parent Material Origin:** Mixed

### **Surface Texture:**

1. Loam
2. Clay
3.

### **Surface Texture Modifier:**

1. Gravel
2. Cobble
3.

**Subsurface Texture Group:** Loamy

**Surface Fragments <=3" (% Cover):** 15 to 35

**Surface Fragments >3" (% Cover):** 15 to 35

**Subsurface Fragments <=3" (%Volume):** 15 to 35

**Subsurface Fragments >=3" (%Volume):** 15 to 35

	<b>Minimum</b>	<b>Maximum</b>
<b>Drainage Class:</b>	<u>Well</u>	<u>Well</u>
<b>Permeability Class:</b>	<u>Slow</u>	<u>Moderate</u>
<b>Depth (inches):</b>	<u>60</u>	<u>&gt;72</u>
<b>Electrical Conductivity (mmhos/cm):</b>	<u>N/A</u>	<u>N/A</u>
<b>Sodium Absorption Ratio:</b>	<u>N/A</u>	<u>N/A</u>
<b>Soil Reaction (1:1 Water):</b>	<u>N/A</u>	<u>N/A</u>
<b>Soil Reaction (0.1M CaCl2):</b>	<u>N/A</u>	<u>N/A</u>
<b>Available Water Capacity (inches):</b>	<u>6</u>	<u>12</u>
<b>Calcium Carbonate Equivalent (percent):</b>	<u>N/A</u>	<u>N/A</u>

## **PLANT COMMUNITIES**

### **Ecological Dynamics of the Site:**

### **Plant Communities and Transitional Pathways (diagram)**

**Plant Community Name:** Historic Climax Plant Community

**Plant Community Sequence Number:** 1 **Narrative Label:** HCPC

**Plant Community Narrative:** Historic Climax Plant Community

This site has a Savannah aspect. Pinyon pine and alligator bark juniper are the dominant trees. The understory is made up of cool-season perennial mid-grasses and forbs. Forb production varies greatly from year to year.

Canopy Cover:

Trees 5 – 10 %

Shrubs and half shrubs 3 – 5 %

Ground Cover (Average Percent of Surface Area).

Grasses & Forbs 15 – 30

Bare ground 15 – 40

Surface gravel 0 – 5

Surface cobble and stone 5 – 15

Litter (percent) 10 – 20

Litter (average depth in cm.) 3 – 4

**Plant Community Annual Production (by plant type):** \_\_\_\_\_

<u>Annual Production (lbs/ac)</u>			
Plant Type	Low	RV	High
Grass/Grasslike	638	1,169	1,700
Forb	60	110	160
Tree/Shrub/Vine	60	110	160
Lichen			
Moss			
Microbiotic Crusts			
Total	750	1,375	2,000

## **Plant Community Composition and Group Annual Production:**

### **Plant Type - Grass/Grasslike**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
1	ELMU3 ELEL5	Big Squirreltail Bottlebrush Squirreltail	138 – 275	138 – 275
2	KOMA	Prairie Junegrass	69 – 138	69 – 138
3	BOGR2	Blue Grama	138 – 206	138 – 206
4	MURI	Mat Muhly	41 – 69	41 – 69
5	PASM	Western Wheatgrass	206 – 275	206 – 275
6	MUMO MUWR	Mountain Muhly Spike Muhly	69 – 206	69 – 206
7	FEAR	Arizona Fescue	41 – 69	41 – 69
8	BLTR	Pine Dropseed	41 – 69	41 – 69
9	BOCU	Sideoats Grama	41 – 69	41 – 69
10	2GRAM	Other Grasses	69 – 138	69 – 138

### **Plant Type - Forb**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
11	CACO17 PENST 2FORB	Indian Paintbrush Penstemon spp. Other Forbs	69 – 138	69 – 138

### **Plant Type – Tree/Shrub/Vine**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production
12	JUDE2 JUNIP PIED	Alligator Bark Juniper Juniper spp. Pinyon Pine	14 – 69	14 – 69
13	QUERC	Oak spp.	41 – 69	41 – 69
14	ARCA14	Carruth Sagewort	41 – 69	41 – 69
15	RHUS MATR3	Sumac spp. Algerita	41 – 69	41 – 69
16	2SD	Other Shrubs	41 – 69	41 – 69

### **Plant Type - Lichen**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production



**Plant Type - Moss**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

**Plant Type - Microbiotic Crusts**

Group Number	Scientific Plant Symbol	Common Name	Species Annual Production	Group Annual Production

Other grasses that could appear on this site include: Pringles needlegrass, Letterman needlegrass, sleepygrass, pinyon ricegrass, littleseed ricegrass, New Mexico muhly, longtongue bluegrass, intermediate wheatgrass, threeawn spp. and wolftail.

Other woody species that could appear on this site include: ponderosa pine, currant, fringed sagewort, rubber rabbitbrush, broom snakeweed, green sagewort, pingue and winterfat.

Other forbs that could appear on this site include: wildbuckwheat, trailing fleabane, aster and Rocky Mountain zinnia.

**Plant Growth Curves**

Growth Curve ID 1604NM

Growth Curve Name: HCPC

Growth Curve Description: Cool-season perennial mid-grass with components of trees, shrubs and forbs.

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
0	0	3	5	5	10	25	30	15	7	0	0

## **ECOLOGICAL SITE INTERPRETATIONS**

### **Animal Community:**

#### Habitat for Wildlife:

This site provides habitats which support a resident animal community that is characterized by elk, deer, coyote, desert cottontail, red squirrel, white-throated woodrat, pinyon mouse, red-tailed hawk, harlequin quail, band-tailed pigeon, scrubjay, meadowlark, chestnut-collared longspur, horned lark, short-horned lizard, tree lizard, garter snake and black-tailed rattlesnake.

Bald eagle hunts over this site and the Sacramento Mountain salamander may be resident under logs and rocks.

### **Hydrology Functions:**

The runoff curve numbers are determined by field investigations using hydrologic cover conditions and hydrologic soil groups.

#### **Hydrologic Interpretations**

<b>Soil Series</b>	<b>Hydrologic Group</b>
Paco	C

### **Recreational Uses:**

This site is well suited to hiking, horseback riding, camping, picnicking, nature observation and photography. Hunting opportunities include deer, elk and turkey. The mountainous setting in which the site occurs enhances natural beauty.

### **Wood Products:**

The potential for wood production is limited to a small amount of fuelwood and fence material from the few scattered pinyon and juniper.

**Other Products:****Grazing:**

This site is suitable for use by all kinds and classes of livestock during late spring to early fall. The length of the grazing season varies with elevations and snow patterns. Because the growing season and grazing season are nearly identical, this site is not suited to continuous grazing. Continuous grazing will cause the more desirable species, such as squirreltail, prairie junegrass, western wheatgrass and pine dropseed to decrease. This will cause an increase in Carruth sagewort, Kentucky bluegrass and broom snakeweed. A system of grazing that rotates the season of use is best suited to improve or to maintain a good healthy plant community.

**Other Information:****Guide to Suggested Initial Stocking Rate Acres per Animal Unit Month**

<b>Similarity Index</b>	<b>Ac/AUM</b>
100 - 76	2.7 – 3.5
75 – 51	3.2 – 5.0
50 – 26	4.5 – 9.0
25 – 0	9.0+

Plant Part	Code	Species Preference	Code
Stems	S	None Selected	NS
Leaves	L	Preferred	P
Flowers	F	Desirable	D
Fruits/Seeds	F/S	Undesirable	U
Entire Plant	EP	Not Consumed	NC
Underground Parts	UP	Emergency	E
		Toxic	T

**Plant Preference by Animal Kind:**

**Animal Kind:** Livestock  
**Animal Type:** Cattle

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Bottlebrush Squirreltail	Elymus elymoides	EP	U	U	D	D	D	U	U	U	D	D	D	U
Prairie Junegrass	Koeleria macrantha	EP	D	D	D	D	D	D	D	D	D	D	D	D
Pine Dropseed	Blepharoneuron tricholepis	EP	D	D	D	D	D	D	D	D	D	D	D	D
Spike Muhly	Muhlenbergia wrightii	EP	D	D	D	D	D	D	D	D	D	D	D	D
Arizona Fescue	Festuca arizonica	EP	D	D	D	D	D	D	D	D	D	D	D	D
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Mountain Muhly	Muhlenbergia montana	EP	D	D	D	D	D	D	D	D	D	D	D	D

**Animal Kind:** Livestock  
**Animal Type:** Horse

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Bottlebrush Squirreltail	Elymus elymoides	EP	U	U	D	D	D	U	U	U	D	D	D	U
Prairie Junegrass	Koeleria macrantha	EP	D	D	D	D	D	D	D	D	D	D	D	D
Pine Dropseed	Blepharoneuron tricholepis	EP	D	D	D	D	D	D	D	D	D	D	D	D
Spike Muhly	Muhlenbergia wrightii	EP	D	D	D	D	D	D	D	D	D	D	D	D
Arizona Fescue	Festuca arizonica	EP	D	D	D	D	D	D	D	D	D	D	D	D
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
Western Wheatgrass	Pascopyrum smithii	EP	D	D	P	P	P	D	D	D	D	D	D	D
Mountain Muhly	Muhlenbergia montana	EP	D	D	D	D	D	D	D	D	D	D	D	D

**Animal Kind:** Livestock

**Animal Type:** Sheep

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Bottlebrush Squirreltail	Elymus elymoides	EP	U	U	D	D	D	U	U	U	U	U	U	U
Prairie Junegrass	Koeleria macrantha	EP	U	U	D	D	D	U	U	U	U	U	U	U
Pine Dropseed	Blepharoneuron tricholepis	EP	D	D	D	D	D	D	D	D	D	D	D	D
Arizona Fescue	Festuca arizonica	EP	D	D	D	D	D	D	D	D	D	D	D	D
Sideoats Grama	Bouteloua curtipendula	EP	P	P	P	P	P	P	P	P	P	P	P	P
Western Wheatgrass	Pascopyrum smithii	EP	U	U	D	D	D	D	D	D	D	D	D	U
Sumac	Rhus spp.	L/S	U	U	D	D	D	D	D	D	U	U	U	U
Oak	Quercus spp.	L/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Carruth Sagewort	Artemisia carruthii	L/S	D	D	U	U	U	U	U	U	D	D	D	D

**Animal Kind:** Livestock

**Animal Type:** Goats

Common Name	Scientific Name	Plant Part	Forage Preferences											
			J	F	M	A	M	J	J	A	S	O	N	D
Sumac	Rhus spp.	L/S	D	D	D	D	D	D	D	D	D	D	D	D
Oak	Quercus spp.	L/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S	N/S
Carruth Sagewort	Artemisia carruthii	L/S	D	D	D	D	D	D	D	D	D	D	D	D

## **SUPPORTING INFORMATION**

### **Associated sites:**

Site Name	Site ID	Site Narrative

### **Similar sites:**

Site Name	Site ID	Site Narrative

### **State Correlation:**

This site has been correlated with the following sites: \_\_\_\_\_

### **Inventory Data References:**

Data Source	# of Records	Sample Period	State	County

### **Type Locality:**

State: New Mexico

County: Lincoln, Otero, Torrance

Latitude: \_\_\_\_\_

Longitude: \_\_\_\_\_

Township: \_\_\_\_\_

Range: \_\_\_\_\_

Section: \_\_\_\_\_

Is the type locality sensitive?    Yes ☐        No ☐

General Legal Description: \_\_\_\_\_

### **Relationship to Other Established Classifications:**

### **Other References:**

Data collection for this site was done in conjunction with the progressive soil surveys within the Arizona and New Mexico Mountains 39 Major Land Resource Area of New Mexico. This site has been mapped and correlated with soils in the following soil surveys. Eddy, Otero, Lincoln and South Chavez Soil Surveys.

Characteristic Soils Are:

Paco

Other Soils included are:

### **Site Description Approval:**

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Don Sylvester	09/17/81	Don Sylvester	09/17/81

### **Site Description Revision:**

<u>Author</u>	<u>Date</u>	<u>Approval</u>	<u>Date</u>
Elizabeth Wright	03/12/03	George Chavez	10/31/03